

CLAIMS

What is claimed is:

- 1 1. A housing for a variable displacement hydraulic pump having a total of six side portions comprised of an open first longitudinal end, a spaced, open second longitudinal end, and four adjoining radial sides connecting said longitudinal ends, and a porting system with four case drains such that an orifice for each of said case drains is located in the vicinity of the top surface of said housing when any one of said six sides is so spatially positioned that it occupies an upwardly directed generally horizontal surface position.
- 1 2. The housing as in claim 1 wherein said variable displacement pump is of a light duty variety.
- 1 3. A housing for a variable displacement hydraulic pump having multiple external surfaces, with at least one case drain orifice in at least two differing ones of said external surfaces.
- 1 4. The housing as in claim 3 wherein said pump is a light duty pump.
- 1 5. The housing as in claim 4 wherein one of said case drain orifices is located in an upwardly-directed generally horizontal surface position, regardless of the spatial orientation of said housing.
- 1 6. The housing as in claim 4 wherein one of said case drain orifices is located at an upper-most section of said housing in any spatial orientation of said housing.

1 7. The housing as in claim 4 wherein one of said at case drain orifices is located at
2 the front-most section of said housing in any spatial orientation of said housing.

1 8. The housing as in claim 4 wherein one of said case drain orifices is located at the
2 rear-most section of said housing in any spatial orientation of said housing.

1 9. The housing as in claim 4 wherein one of said case drain orifices is located at the
2 bottom-most section of said housing in any spatial orientation of said housing.

1 10. A light duty, variable displacement hydraulic pump having a multi-sided surface
2 housing and an attached endcap wherein said housing has at least one case drain orifice in
3 differing ones of at least three housing surfaces, said orifices being located near an upper-
4 most surface of said pump in any spatial orientation of said pump.

1 11. In a variable displacement hydraulic pump having a housing with a multiplicity of
2 interconnected surfaces, including opposed end surfaces and intermediate side surfaces,
3 the improvement comprising the location of at least one case drain orifice in each of a
4 plurality of differing ones of said surfaces in a manner such that at least one of said
5 orifices is located in the vicinity of the top surface of said housing in any spatial
6 orientation of said housing.

1 12. The improved housing of claim 11, wherein said variable displacement hydraulic
2 pump is of a light duty variety.

1 13. The improved housing of claim 11, wherein said housing includes two end
2 surfaces and a plurality of intermediate side surfaces.

1 14. The improved housing of claim 12, wherein said case drain orifices are located
2 within at least some of said plurality of intermediate side surfaces.

1 15. The improved housing of claim 13 wherein said at least some of said plurality of
2 intermediate side surfaces is no less than three.